

REV 2 - DREDGE OPERATION PLAN
FOR
MAINTENANCE DREDGING
AT THE FOSTER CITY LAGOON INTAKE STRUCTURE
U.S. ARMY CORP OF ENGINEERS PERMIT # 2015-00405S
BCDC PERMIT NO.
08/09/2017
EPISODE #1

Dredging Contract:	Foster City Lagoon Intake Structure Dredging
Dredging Contractor:	Salt River Construction Corp.
Representative:	Rick Moseley (cell 415 601-1024,435-1024)
On-Site Dredge Operator:	Jack Wolf (530 448-6583 cell)
Proposed Dredging Start Date:	September 1st, 2017
Dredging End Date:	November 30th, 2017
Tugboats:	Double Eagle
Call Signs:	WDH5205
Dredge Vessel/Dump Scow Capacity:	DB#1, DB#4, Danny B, Johnny B, Miwok Chief 350 CYS (1&4) + 1,000 CYS Hopper barge Capacity
Maintenance or new work:	Maintenance
Date of last dredging episode:	October, 1978
Type of dredging equipment;	Excavator Bucket Dredge

Dredge Volumes:

Design Depth Volume:	11,930 Cubic Yards
Overdredge Volume:	870 Cubic Yards
Total Volume, Inc. Over dredge:	12,800 Cubic Yards

Total Volume Inc. Over dredge of entire project: 12,800 cubic yards

Dredging Depths:

Design Depth this Episode	-5.0' MLLW (along center line of channel)
Overdredge Allowance:	1.0 ft.
Maximum Dredge Depth	-6.0' MLLW

Special Note: The restored invert of the channel would be approximately 10 feet wide with 4:1 side slopes up to the adjacent mudflats.

Acres:	1.33-acres within the West Intake Channel
Grid System:	All material will pass through a grizzly screen with openings not larger than 12 square inches.
Disposal Site:	Upland Disposal at Cullinan Ranch - See below disposal detail pump-off of material at Cullinan Ranch.
Dredging process:	<p>Dredging will be performed by using an excavator mounted on a dump scow. The excavator has a mechanical arm with an attached bucket. The bucket will be lowered into the mud and with rotational action the bucket will scoop excavated material into the bucket. The excavator will then lift the material out of the cut, rotate and place material into the hopper of the scow (passing through the 12" by 12" grizzly). Once the barge is filled, it will be pushed to the disposal site with a tug boat. A clarification that when dredging is ongoing the dredged sediment is to be placed in the scow for disposal, not back into the Bay for holding purposes, and that when a scow is full, dredging should stop and the scow emptied prior to starting dredging again unless another scow is available to be filled.</p>
Dredging Controls:	<p>Dredging depth will be controlled by installing tide staffs visible to the dredge operator and taking frequent soundings during the dredging operation. Depth of dredge cut will be controlled by referencing the tide staff to determine existing water surface elevation and lowering the excavator bucket to the design dredge depth aided by markings placed on the excavator arm. Location of dredging will be controlled by physically measuring and staking the limits of dredging off the existing benchmark in the area, and off benchmarks noted landside. Field notes shall be maintained noting dredge depths used to determine design depth has been achieved prior to moving to the next section of the dredge area.</p> <p>An electronic positioning system for tracking the path of the barge to and from the disposal site, as</p>

well as positioning the dump barge at the dumpsite will be used. The system uses a ten channel GPS sensor and provides an accuracy of 3 to 5 meters. The track record of the path will be recorded every minute into the computer memory with a format that will display time and position coordinates.

Sensor locations:

The location of the antenna for the GPS is above the wheelhouse of the tugboat. The data collector computer is located adjacent to the boat captain in the wheelhouse of the tug boat. The tug boat is connected to the dump scow with steel cables and at the point of dumping the location of the GPS receiver is within 3 meters of the stern of the dump barge.

Notice to Coast guard:

Two weeks prior to commencing dredging, Salt River will provide written notification to the commander of the 11th Coast Guard District of activities affecting navigation.

Vessel Traffic Control:

Salt River will check into Vessel Traffic control when transiting the bay with their dump barge or any other barge. SRCC crew will be on the scene monitoring on VHF channels 13, 14, and 77.

Overflow and spillage:

The dump barge will not be allowed to overflow while loading or transporting material to the disposal site. The dredge operation and disposal crews will assure this through constant visual inspection.

Pre-dredge survey:

A pre-dredge survey was performed on August 3, 2017 and is enclosed with this DOP along with a typical cross section for review and approval.

Best Management Practices:

In order to reduce suspended sediment during dredging operations, we have the ability to control our backhoe movements to a more precise level than a clamshell bucket. We will place the backhoe bucket parallel to the bottom when removing accumulated sediment and carefully pull it towards the dredge then lift it vertically to the surface for deposition of the dredged material into the barge.

Careful control of the bucket positions minimizes spillage and consequent suspended sediments.

While moving the barge and dredge rig into and out of the dredge area, low speeds will be maintained to impede or prevent any scouring that may occur as a result of vessel speed or traffic through the dredge area.

Project Status Correspondence:

Dump Logs will be submitted every Monday following the previous week of dredging. Commencement notices will be faxed to the Corps the day dredging begins. BCDC will be notified within 7 days of commencing dredging. Suspension and resumption of work will be faxed to the Corps if dredging is suspended for more than two days. A notice of completion will be faxed to the Corps after all dredging is complete.

**SOLID DEBRIS MANAGEMENT PLAN
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Any solid debris collected during the dredging activities will be removed from the “Grizzly” and placed on the dredge barge deck in suitable debris containers at least daily or more frequently if required. The debris collected on the dredge barge will be offloaded into debris boxes and disposed of at an approved upland solid debris disposal site suitable for the type of debris collected.

Sources of debris are likely to be items dropped or discarded by boaters into the waters surrounding the intake structure in Foster City. Such items may include food waste and containers, trash, dock or boat hardware, cans, bottles, rocks, etc.

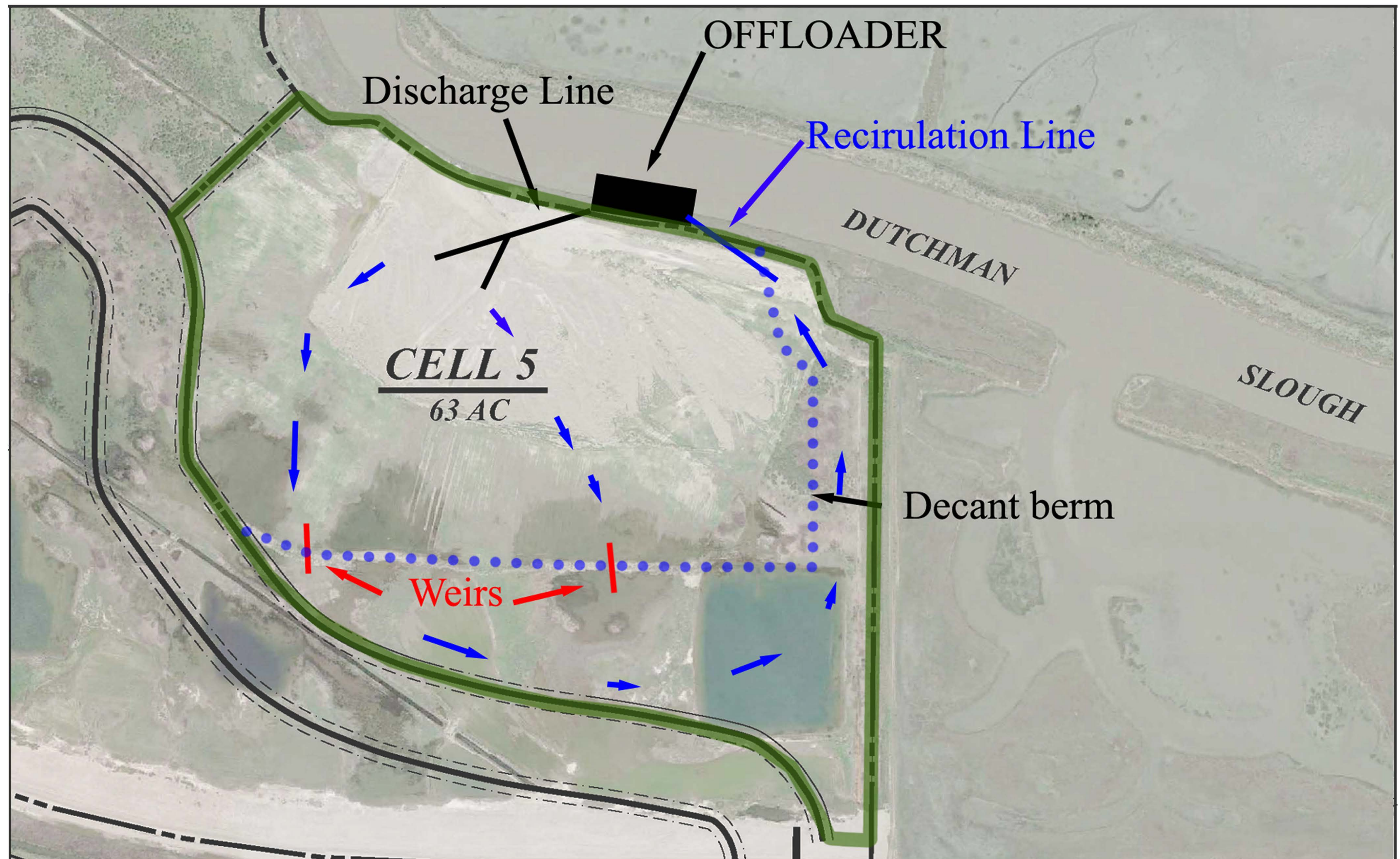
Although floating debris is not anticipated, Salt River will have a floating boom stowed onboard the dredge barge which could be used for containment of any floating debris. Such debris would be collected when encountered and deposited/secured onto the backside of our dump scows and disposed of as described above.

UPLAND DISPOSAL PUMP-OFF PLAN AT CULLINAN RANCH
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Salt River Construction will be transporting our (3) Hopper Barges; Danny B, Johnny B, and Miwok Chief to Cullinan Ranch per the attached plan view and utilize our 10" Toyo Pump off the dredge material.

We will be pulling water from the slough through approved fish screens from the period of September 1st through November 30th, 2017.

- Attached is an exhibit showing the general authorized set up.
- Pumping distance would depend on material placed this season within cell 5 but is anticipated to be on the order of 300 feet.
- If pumped material flows reasonably we will not need to relocate the pipeline discharge. If it needs relocating they would need to perform that work.



**CULLINAN RANCH
DREDGE MANAGEMENT AREA**

0 300 600
HORIZONTAL SCALE FEET

